

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

3. (Amended) A method of claim 1-~~or 2~~, **characterized** in that the mutation or mutations are located in the trinucleotide (CAG) microsatellite repeat of the *POLG* gene.

5. (Amended) A method of claim 1-~~or 2~~, **characterized** in that the mutation or mutations are located in or near a coding region of the *POLG* gene.

6. (Amended) A method of claim 1-~~or 2~~, **characterized** in that one mutation or mutations are located in one allele of the *POLG* gene in the trinucleotide (CAG) microsatellite repeat and another mutation or other mutations in the other allele of the mutant *POLG* gene in or near a coding region of the gene.

7. (Amended) A method of ~~any one of~~ claims 1-~~or 6~~, **characterized** in that the detection of the mutation is performed using a gene-technological method.

9. (Amended) A method of ~~any one of~~ claims 1-~~or 6~~, **characterized** in that the detection of the mutation or mutations is performed using an immunological method, such as a Western analysis, immunohistology or immunoassay, for characterization of a mutant gene or gene product.